

### IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A labeled proteinoid microsphere comprising a mixture of amino acids that are condensed and a label comprising a fluorophore, a chemiluminescent molecule, a radioisotope, a paramagnetic ion, a metal, or an enzyme; wherein the label is linked to the proteinoid microsphere.
2. (Original) The labeled proteinoid microsphere of claim 1 wherein the label is barium sulfate, iocetamic acid, iopanoic acid, ipodate calcium, diatrizoate sodium, diatrizoate meglumine, metrizamide, tyropanoate sodium, fluorine-18, carbon-11, iodine-123, technitium-99m, iodine-131, indium-111, fluorine, gadolinium, fluorescein, isothiocyalate, rhodamine, pacific blue, phycoerythrin, phycocyanin, allophycocyanin, ophthaldehyde, fluorescamine, luminal, isoluminal, luciferin, luciferase or aequorin.
3. (Original) The labeled proteinoid microsphere of claim 1 wherein the proteinoid microsphere is formed by thermal condensation of a mixture of amino acids in the presence of a crosslinking agent.
4. (Original) The labeled proteinoid microsphere of claim 3 wherein the crosslinking agent is carbodiimide, glutaraldehyde, N-(m-maleimidobenzoyloxy)-succinimide, a bifunctional sulfhydryl reagent.
5. (Currently Amended) The labeled proteinoid microsphere of claim 1 that is ~~used~~ synthesized for signal amplification or diagnostic imaging.
6. (Original) The labeled proteinoid microsphere of claim 1 wherein the mixture of amino acids are thermally condensed.

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7. (Withdrawn) A labeled proteinoid microsphere that is capable of binding to a specific target comprising a proteinoid microsphere linked to a label and a selective binding moiety that can bind to a specific target.
  8. (Withdrawn) The labeled proteinoid microsphere of claim 6 wherein the label comprises a fluorophore, a chemiluminescent molecule, a radioisotope, a paramagnetic ion, a metal, or an enzyme.
  9. (Withdrawn) The labeled proteinoid microsphere of claim 6 wherein the label is barium sulfate, iocetamic acid, iopanoic acid, ipodate calcium, diatrizoate sodium, diatrizoate meglumine, metrizamide, tyropanoate sodium, fluorine-18, carbon-11, iodine-123, technitium-99m, iodine-131, indium-111, fluorine, gadolinium, fluorescein, isothiocyalate, rhodamine, pacific blue, phycoerythrin, phycocyanin, allophycocyanin, ophthaldehyde, fluorescamine, luminal, isoluminal, luciferin, luciferase or aequorin.
  10. (Withdrawn) The labeled proteinoid microsphere of claim 6 wherein the proteinoid microsphere is formed by thermal condensation of a mixture of amino acids in the presence of a crosslinking agent.
  11. (Withdrawn) The labeled proteinoid microsphere of claim 9 wherein the crosslinking agent is carbodiimide, glutaraldehyde, N-(m-maleimidobenzoyloxy)-succinimide, a bifunctional sulfhydryl reagent.
  12. (Withdrawn) The labeled proteinoid microsphere of claim 6 wherein the selective binding moiety is an antibody, a ligand, a receptor, a peptide, a peptidyl analogue or a polypeptide.
  13. (Withdrawn) The labeled proteinoid microsphere of claim 6 that is used in an immunoassay.

14. (Withdrawn) The labeled proteinoid microsphere of claim 12 wherein the immunoassay is a radioimmunoassay, an ELISA, an immunofluorescence assay or a sandwich assay.
15. (Withdrawn) The labeled proteinoid microsphere of claim 6 that is used for diagnostic imaging or signal amplification.
16. (Withdrawn) The labeled proteinoid microsphere of claim 6 wherein the signal amplification is at least about thirty-fold relative to an antibody preparation linked to the same label.
17. (Withdrawn) A labeled proteinoid microsphere that is capable of binding to a specific target comprising a proteinoid microsphere linked to a label and an antibody that can bind to a specific target.
18. (Withdrawn) The labeled proteinoid microsphere of claim 17 wherein the proteinoid microsphere comprises a thermally-condensed mixture of amino acids comprising an acidic amino acid and a basic amino acid.
19. (Withdrawn) The labeled proteinoid microsphere of claim 17 wherein the label comprises a fluorophore, a chemiluminescent molecule, a radioisotope, a paramagnetic ion, a metal, or an enzyme.
20. (Withdrawn) The labeled proteinoid microsphere of claim 17 wherein the acidic amino acid is aspartic acid or glutamic acid or a mixture of both.
21. (Withdrawn) The labeled proteinoid microsphere of claim 17 wherein the basic amino acid is arginine or lysine, or a mixture of both.

22. (Withdrawn) The labeled proteinoid microsphere of claim 17 wherein the mixture of amino acids further comprises cysteine.